

WHAT IS CLAIMED:

SUB 1. A device for clamping and ablating cardiac tissue comprising:

a first handle member;

5 a second handle member pivotally connected to the first handle member;

first and second mating jaw members associated with the first and second handle members, respectively, the jaw members each having a distal tip and being movable by the handle members between a first open position and a second clamped position, the jaw members having insulated outer surfaces with convex, opposed mating surfaces, each mating surface having a central peak, the central peak of the first jaw being aligned with the central peak of the second jaw;

15 a first elongated ablation electrode extending along the central peak of the first jaw member;

a second elongated ablation electrode extending along the central peak of the second jaw member;

20 the first and second ablation electrodes being adapted to be connected to an RF energy source so that, when activated, the first and second ablation electrodes are of opposite polarity; and

25 one of said first and second jaw members including a pair of EKG monitoring sensors on the tip spaced distally from its associated ablation electrode for contacting cardiac tissue and being adapted to be connected to an EKG monitor, so that when cardiac tissue is grasped between the first and second jaws, the EKG sensors contact the cardiac tissue and transmit the signals generated by the tissue to the EKG monitor.

30 2. The device of claim 1 wherein the electrodes are between approximately 3 to 8 cm in length and approximately 0.12 to 0.6 mm in width.

3. The device of claim 1 wherein the electrodes comprise gold-plated copper.

4. The device of claim 1 wherein one of the jaws is fixed and the EKG monitoring sensors are associated with the fixed jaw.

5. A cardiac tissue grasping apparatus comprising:
first and second grasping jaws, the grasping jaws each having a distal tip and being relatively moveable between open and closed positions; each jaw including a raised electrode and a receding clamping surface in face-to-face relation with the electrode and clamping surface of the other jaw; the clamping surfaces of the jaws comprising an insulating material and the raised, face-to-face electrodes being of opposite polarity and connectible to a power source for providing an electrical current between the electrodes; whereby when tissue is grasped between said clamping surfaces, the electrodes are substantially entirely contacted by the tissue; and

one of said first and second grasping jaws including a pair of EKG monitoring sensors on the tip spaced distally from its associated electrode for contacting cardiac tissue and being adapted to be connected to an EKG monitor, so that when cardiac tissue is grasped between the first and second grasping jaws, the EKG sensors contact the cardiac tissue and transmit the signals generated by the tissue to the EKG monitor.

6. The apparatus of claim 5 wherein the electrodes are between approximately 3 to 8 cm in length and approximately 0.12 to 0.6 mm in width.

7. The apparatus of claim 5 wherein the electrodes comprise gold-plated copper.

8. The device of claim 5 wherein one of the jaw members comprises a piercing tip adapted to puncture myocardial tissue.

5 9. The device of claim 5 wherein one of the jaws is fixed and the EKG monitoring sensors are associated with the fixed jaw.

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